sentence bridging pages 14 and 15; and Example 1. Claims 37 and 38 are supported by original Claim 1.

Claims 39 and 40 are based on the combination of original Claims 1, 2, and 14. Claims 41-57 are supported by original Claims 3-13. Claims 58-61 correspond to Claims 35-38, respectively, but depend or ultimately depend on Claim 39.

No new matter has been added by the above amendment. Claims 16-61 are now pending in the application.

REMARKS

The rejection of Claims 1, 4-7 and 12-13 under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 5,777,779 (Hashimoto et al), is respectfully traversed. All of the present claims now contain at least the limitations of original Claim 2, not subject to this rejection. Accordingly, it is respectfully requested that it be withdrawn.

The rejections under 35 U.S.C. §103(a) as unpatentable over Hashimoto et al in view of:

for Claims 2-3 and 11,	JP 08-083581;
for Claims 8-9,	EP 692,463 (Chartier et al);
for Claim 14,	U.S. 5,578,404 (Kliem); and
for Claim 10,	WO 97/10185 (Chopin et al),

are respectively traversed.

The present invention relates to glazing having electrically controllable optical and/or energy properties.

Thus, it relates to glazing some of whose characteristics can be modified by a suitable electrical supply, most particularly the transmission, the absorption and reflection within

certain wavelengths of electromagnetic radiation, especially in the visible and/or in the infrared, or else the light scattering.

There is in fact an increasing demand for so-called "smart" glazing whose properties may be varied.

Thus, from the thermal standpoint, glazing whose transmission/absorption may be varied within at least part of the solar spectrum allows the solar heat influx into rooms or passenger areas/compartments to be controlled when it is fitted as the external glazing in buildings or as windows in transportation means of the type comprising cars, trains, aeroplanes, etc., and thus it allows excessive heating of the latter to be prevented should there by strong sunlight.

From the optical standpoint, the glazing allows the degree of vision to be controlled, thereby making it possible to prevent glare should there be strong sunlight, when it is mounted as exterior glazing. It may also have a particulary advantageous shutter effect, both as exterior glazing and if it is used as interior glazing, for example for equipping internal partitions between rooms (offices in a building), or for isolating compartments in trains or aeroplanes, for example.

As described in the specification, such "smart" glazing is known, and is inclusive of many different functional systems. In the prior art, in order to change an effect produced by one of these systems, it was generally necessary to alter the system itself. This is uneconomical. In the present invention, Applicants have invented ways to modify the effects of such functional systems without altering the layers of the systems themselves but rather, by adding additional layers.

In fact, the invention is a combination of an electrically controllable system, especially an electrochromic one, with at least a stack of thin layers enhancing the optical

properties of said system: the two systems interact optically with each other, so as to obtain a product that can reach interesting, new properties. With the incorporation of a stack of thin layers having anti-reflecting properties, the electrochromic system is going to shift its range of luminous transmission/energetic transmission towards higher values, without changing anything in the system itself. As disclosed in the specification, this makes it possible to choose and produce a single electrochromic system, and then to vary its range of optical variation under appropriate voltage thanks to other thin layers that do not belong to the system, like an anti-reflecting stack.

In one embodiment, as now claimed in Claim 16 and claims dependent thereon, the glazing comprises at least one electrically controllable system having variable optical and/or energy properties, and both at least one antireflection coating, described in the specification beginning at page 6, line 20, and at least one coating for attenuating/modifying the color of the glazing in reflection, as described in the specification beginning at page 9, line 4. When both the antireflection and attenuating/modifying coatings are present, superior results are obtained, which are unobtainable without both layers, or without the antireflection coating. This superiority is demonstrated in the comparative data of record, and particularly, in Examples 3 and 4, described in the specification beginning at page 18, line 37. Better filtering properties toward heat rays, higher TL values in the bleached state (with a TL that can reach 80%, which is a real achievement for an electrochromic glazing, because the electrochromic layers, even in the bleached state, do remain a little bit absorbing). So, the anti-reflecting stack of thin layers acts in synergy with the electrochromic system, thermally **and** optically, both in the colored and uncolored state of the electrochromic system, which combination of both thermal and optical effects could not have been predicted.

In another embodiment of the present invention, as claimed in Claim 32 and claims dependent thereon, the above-discussed at least one antireflection coating is present, and the electrically-controllable system is a superposition of functional layers placed on a carrier substrate and provided with a protective film of the inorganic or polymeric layer type, in the form of a lacquer or varnish. This embodiment, especially when it is directed to an "all solid" electrochromic system as recited in Claim 45, is superior because this structure is really very "light", very compact, compared to the usual laminated windows or screens, and also because it is optically very advantageous.

With a single rigid substrate, instead of two, there is an important gain in weight and thickness of the glazing as a whole, which may be crucial for certain uses (for instance, as sunroofs for automobiles, where the thickness is mostly determined by the frame that has to be flush with the rest of the body of the car: a "thick" pane is a problem).

A glazing with a single rigid substrate like a glass plate makes it also possible to skip the laminating process of the laminated windows (a process that requires a re-heating of the two glass plates + a thermoplastic layer + the electrochromic system under pressure, which is not very cost effective, obviously, and which is also not very good for the relatively fragile layers of the electrochromic layers).

This "light" structure is also very good in the optical point of view, because a second glass plate within the pane adds at least 4% of luminous reflection to the pane. So, a single glass plate, which is furthermore treated by a stack of anti-reflecting layers, makes it possible to limit as much as possible any "glaring" effect (the protective varnish, on the opposite side of the electrochromic system, is so thin that it interferes only in a very limited way in the optical point of view, clearly much less than a second glass plate).

The presently-claimed subject matter is neither disclosed nor suggested by the applied prior art. Hashimoto et al is drawn to an electrochromic device. While, as the Examiner finds, Hashimoto et al discloses the presence of an antireflection coating, neither Hashimoto et al alone, nor combined with any of the other applied art, disclose or suggest the above-discussed benefits in using the present invention. Note particularly that Kliem, which has been applied in the rejection of Claim 14, does not relate to an "all-solid" electrochromic system. Rather, Kliem relates to a liquid crystal system. As shown in Figure 1 and column 14, line 14ff therein, the active layer, i.e., the liquid crystal layer 32, is between two rigid substrates 46, 22: the protective layers 12 and 16 are not protective towards the "active" layer 32, but toward a polarizing layer 14, by sandwiching it.

For all of the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

The rejection of Claims 1, 6-7, 10 and 14 under 35 U.S.C. §112, second paragraph, is respectfully traversed. Indeed, the rejection is now moot in view of the above-discussed amendment. Accordingly, it is respectfully requested that it be withdrawn.

Regarding the objection to the drawings, **submitted herewith** is a Letter Requesting Approval of Drawing Changes. The Letter requests that Fig. 1 be changed to add reference 3, which is a combination of layers 4-10, inclusive, as supported in the specification at page 17, lines 14-16 and 18-33. Accordingly, it is respectfully requested that the objection be withdrawn.

Applicants note the Examiner's suggestion regarding arrangement of the specification. Applicants have no objection to the Examiner adding descriptive headings, as applicable, by Examiner's amendment upon allowance of this application.

All of the presently pending claims in the application are now believed to be in immediate condition for allowance. Accordingly, Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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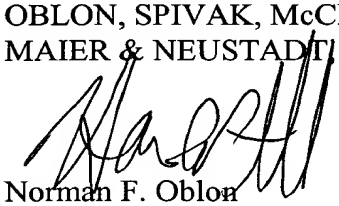

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1247-0855-0V PCT

Marked-Up Copy
Serial No:
09/486,719
Amendment Filed on:
Nov 5, 2001

IN THE CLAIMS

Claims 1-15 (canceled)

Claims 16-61 (new)